



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/699,270 | 10/31/2003 | Jacob Sharony | 40116/03801 | 2040 |

7590 06/06/2005

OLEG F. KAPLUN
FAY KAPLUN & MARCIN, LLP
150 BROADWAY
SUITE 702
NEW YORK, NY 10038

| |
|----------|
| EXAMINER |
|----------|

DEAN, RAYMOND S

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2684

DATE MAILED: 06/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/699,270 | SHARONY, JACOB | |
| | Examiner | Art Unit | |
| | Raymond S Dean | 2684 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 – 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moreton et al. (US 2004/0013128) in view of Proctor (US 2003/0048770) and in further view of Jung et al. (6,853,348).

Regarding Claims 1,9, Moreton teaches a system for wireless communication utilizing a first wireless band and a second wireless band, comprising: a first wireless device including a first dual-band wireless transceiver and a antenna (Figure 3, Sections 0053, 0061, and 0062), the first device, using the antenna, transmitting payload data exclusively on the first band without having to reserve the first band prior to transmission (Sections 0073, 0087, and 0088); and at least one second wireless device including a second dual-band wireless transceiver, the second device acknowledging reception of the payload data using at least one of the first and second bands by omnidirectionally transmitting acknowledgment data (Figure 2, Section 0057 lines 1 – 5, the 802.11 protocol comprises transmitting acknowledgements, the typical mobile devices in a WLAN have omni-directional antennas).

Moreton does not teach a smart antenna uni-directionally transmitting payload data on a first band.

Proctor teaches a smart antenna uni-directionally transmitting payload on a band (Figure 1, Sections 0007 lines 10 – 13, 0008 lines 6 – 9, the antenna apparatus transmits and receives signals).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the antenna apparatus of Proctor as an alternative to the antennas of Moreton for the purpose of alleviating multipath fading as taught by Proctor.

Moreton in view of Proctor does not teach a smart antenna transmitting on a first band.

Jung teaches an antenna transmitting on a first band (Column 1 lines 53 – 55, Column 2 lines 17 – 18, Column 2 lines 35 – 39).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the radiator and conductors of Jung in the smart antenna of Moreton in view of Proctor for the purposes of creating a smart antenna that can communicate on both the 2.4 and 5 GHz bands and support higher data rates as taught by Jung.

Regarding Claim 16, Moreton teaches a wireless device, comprising: a dual-band wireless transceiver capable of wirelessly transmitting using first and second wireless bands (Figure 3, Sections 0053, 0061, and 0062); and a antenna (Figure 3), wherein payload data is transmitted using the antenna on the first band without having to reserve the first band prior to the transmission of the payload data (Sections 0073,

0087, and 0088) and wherein the transceiver transmits further payload data on the second band having reserved the second band prior to transmitting the further payload data (Section 0084).

Moreton does not teach a smart antenna uni-directionally transmitting on the first band and omni-directionally transmitting on the second band.

Proctor teaches a smart antenna uni-directionally transmitting and omni-directionally transmitting on a band (Figure 1, Sections 0007 lines 10 – 13, 0008, the antenna apparatus transmits and receives signals).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the antenna apparatus of Proctor as an alternative to the antennas of Moreton for the purpose of alleviating multipath fading as taught by Proctor.

Moreton in view of Proctor does not teach a smart antenna transmitting on a first and second band.

Jung teaches an antenna transmitting on a first and second band (Column 1 lines 53 – 55, Column 2 lines 17 – 18, Column 2 lines 35 – 39).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the radiator and conductors of Jung in the smart antenna of Moreton in view of Proctor for the purposes of creating a smart antenna that can communicate on both the 2.4 and 5 GHz bands and support higher data rates as taught by Jung.

Regarding Claims 2, 10, Moreton in view of Proctor and in further view of Jung teaches all of the claimed limitations recited in Claims 1, 9. Moreton further teaches

Art Unit: 2684

wherein the second device omni-directionally transmits further payload data using only the second band (Figure 2, Section 0057 lines 1 – 5, the typical mobile devices in a WLAN have omni-directional antennas), the second device reserving the second band prior to transmission of the further payload data (Section 0084).

Regarding Claims 3, 11, 18, Moreton in view of Proctor and in further view of Jung teaches all of the claimed limitations recited in Claims 1, 9, 16. Moreton further wherein the first band is 5 GHz band and the second band is a 2.4 GHz band (Section 0053).

Regarding Claims 4, 12, 19, Moreton in view of Proctor and in further view of Jung teaches all of the claimed limitations recited in Claims 1, 9, 16. Proctor further teaches wherein prior to uni-directionally transmitting the payload data via the first band, the first device determining location of the second device (Section 0039 lines 10 – 13).

Regarding Claims 5, 13, Moreton in view of Proctor and in further view of Jung teaches all of the claimed limitations recited in Claims 1, 9. Moreton further teaches wherein the first device transmits data using the second band to the second device (Section 0088), the first device reserving the second band prior to the transmission (Section 0084). Proctor further teaches omni-directionally transmitting data (Section 0008 lines 3 – 4).

Regarding Claims 6, 14, 20, Moreton in view of Proctor and in further view of Jung teaches all of the claimed limitations recited in Claims 2, 9, 19. Moreton further teaches transmission of the payload data from the first device to the second device via

the first band and transmission of the further payload data from the second device to the first device via the second band are simultaneous (Section 0053).

Regarding Claims 7, 15, 21, Moreton in view of Proctor and in further view of Jung teaches all of the claimed limitations recited in Claims 6, 14, 20. Proctor further teaches wherein coverage areas of the corresponding uni-directional and omni-directional transmissions are substantially similar (Section 0007 lines 1 – 4, the coverage of a typical adaptive antenna array can be adjusted such that the uni-directional coverage is substantially similar to the omni-directional coverage).

Regarding Claims 8, 17, Moreton in view of Proctor and in further view of Jung teaches all of the claimed limitations recited in Claims 1, 16. Moreton further teaches wherein the first device is an access point (Section 0053).

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond S Dean whose telephone number is 571-272-7877. The examiner can normally be reached on 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay A Maung can be reached on 571-272-7882. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2684

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Raymond S. Dean

May 16, 2005



NAY MAUNG

SUPERVISORY PATENT EXAMINER